REMARKS

Applicants do not traverse the Examiner's withdrawal of claim 7 as being drawn to a non-elected species.

The objections to the specification and claims have been obviated by revising the paragraph bridging pages 28 and 29 and claims 1 and 4 in conformance with the suggestions given by the Examiner in the last Office Action.

The objection to the drawings has been obviated by the concurrent filing of substitute drawing sheets that correct the errors point out by the Examiner in the last Office Action.

Independent claims 1 and 4 have been amended to more clearly distinguish the invention from the prior art of record. However, before the specific language of the amendment is discussed, a brief recap of the principal features and advantages of the invention will be made so that the language used in the amendment may be more fully appreciated.

Generally speaking, the invention is an outer mirror device having a mirror, a mirror surface angle adjusting mechanism, a mirror surface angled detecting mechanism, and a control device electrically connected to both the mirror surface angle adjusting mechanism and detecting mechanism in order to supply power to these mechanisms without the need for a large number of electrical cables. As set forth in the "Background ..." of the specification, many outer mirror devices for automotive vehicles now include a number of mechanisms in addition to mirror angle adjusting and detecting mechanisms (such as a mirror anti-glare mechanism, a water droplet removing mechanism, an illuminating device and image pick up device) each of which requires electrical power. In the prior art (as is illustrated in Figure 9 of the present application), each of these devices had separate power cables connected thereto. However, the large number of power cables is difficult to accommodate through the interiors of the stay 218 and hollow stand 220, as shown in Figure 9.

To solve this problem, the invention utilizes a control device (illustrated as control substrate 86 in Figure 3) which receives power from only four different cables. The control substrate 86 acts as a switching device to connect power from the four incoming cables to either or both of the mirror angle adjusting and detecting mechanisms, or any other mechanisms within the mirror visor, thereby reducing the number of power cables accommodated through the stay and stand of the mirror device.

In order to increase the durability and reliability of the outer mirror device of the invention, the control circuit is accommodated within its own waterproof case. Advantageously, the mirror surface angle detecting sensor is accommodated within the waterproof case containing the control circuit. Accordingly, as is pointed out in the first full paragraph of page 17,

> "there is no need for an exclusive case for preventing entry of water into the mirror surface angle detecting sensor. Namely, the number of places where waterproofing countermeasures are taken within the mirror visor is reduced, and a waterproof connector which was needed in the conventional art is not needed."

In the preferred embodiment, the mirror angle adjusting mechanism is accommodated within a first case, while the control device and mirror surface detecting surface are disposed within a second case. Physical separation between the mirror surface angle adjusting mechanism and the control mechanism afforded by two separate cases not only affords some measure of redundancy with respect to the waterproofing of these components; it also facilitates the manufacturing process by effectively modularizing these components so that they may be easily assembled before being contained by the mirror visor.

Claim 1 has been revised to more specifically recite the aforementioned, dual-case structure of the invention, specifically, amended claim 1 now recites an outer mirror device for a vehicle that comprises a mirror, a mirror surface angle adjusting mechanism mounted to the mirror, a mirror surface angle detecting mechanism which can detect the mirror surface angle of the mirror, a control device electrically connected to the mirror surface angle

adjusting mechanism and the mirror surface angle detecting mechanism that supplies power to these components at appropriate times, a mirror visor that accommodates the mirror surface angle and adjusting mechanism and control device, and "a case having a wall disposed between said mirror surface angle adjusting mechanism and said control mechanism."

None of the references of record discloses or suggests the outer mirror device recited in amended claim 1. All that the Hamamoto '322 patent discloses an electrical rear view mirror system for a motor vehicle having a housing 3 that contains both a mirror drive mechanism 4, a pair of position sensors 116 and 117 for sensing the position of the mirror, and a printed circuit board 14 for providing power to these components (see Fig. 5). There is no disclosure nor any suggestion of a case containing said control device having a wall disposed between said mirror surface angle adjusting mechanism and said control mechanism." Instead, there is only a single housing 3 that contains all such mechanisms without any such wall "disposed between said mirror surface angle adjusting mechanism and said control mechanism." Accordingly, amended claim 1 is clearly patentable over the Hamamoto '322 patent.

Claims 2 and 3 have been withdrawn, and therefore will not be discussed.

Claim 4 has been amended in a similar fashion to amended claim 1, and hence is patentable for the same reason. Specifically, claim 4 now recites "wherein one of said first and second cases includes a wall disposed between said mirror surface angle adjustment mechanism and said control device ..." Accordingly, amended claim 4 is clearly patentable over the Hamamoto '322 patent.

Claim 5 has been withdrawn, and therefore requires no further discussion.

Claim 6 is patentable not only by reason of its dependency upon claim 4, but for its recitation that the mirror surface angle detecting sensor is provided at the control substrate.

Claims 7 and 8 have been withdrawn, and therefore will not be discussed.

Claim 9 is patentable not only by reason of its dependency upon claim 4, but for its recitation that the first and second cases are integral.

Claim 10 is patentable not only by reason of its dependency upon claim 1, but for its recitation that the wall separating the control mechanism and the mirror surface angle detecting mechanism "forms a portion of one of said first and second cases."

Claim 11 is patentable at least by reason of its dependency upon claim 10.

New claim 12 is dependent upon claim 1, and specifies that the wall forms a portion of a case enclosing both the control mechanism and the mirror surface angle detecting mechanism. Accordingly, new claim 12 is clearly patentable over the art of record.

New claim 13 is dependent upon claim 1, and recites that the mirror surface angle adjusting mechanism includes a case "having a frame wall that faces said first wall."

New claim 14 is dependent upon claim 13, and specifies that the first and frame walls are connected. Accordingly, new claim 14 is patentable.

New claim 15 is dependent upon claim 12, and specifies that the case enclosing the control mechanism in the mirror's surface angle detecting mechanism "is water tight." Accordingly, new claim 15 is patentable.

New claim 16 is dependent upon claim 4, and is patentable for the reasons given with respect to new claim 15.

New claims 17, 18, 19 and 20 are patentable not only by reason of their ultimate dependency upon amended claims 4 and 1, but for the recitation of other structural features

which defines the invention in terms even farther removed from the Hamamoto '322 patent. Accordingly, these claims are likewise patentable.

Now that all the claims are believed to be patentable, the prompt issuance of a Notice of Allowance and Issue Fee Due is hereby earnestly solicited.

The Commissioner is authorized to charge any overage or shortage of fees connected with filing of this Amendment to Deposit Account No. 19-2380.

Respectfully submitted,

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AMENDMENTS TO THE DRAWINGS

Figures 1 and 4 of the attached drawing sheets include changes to incorporate reference numerals 78A, 105 and 107. Figure 9 has also has been amended to include the legend "PRIOR ART".

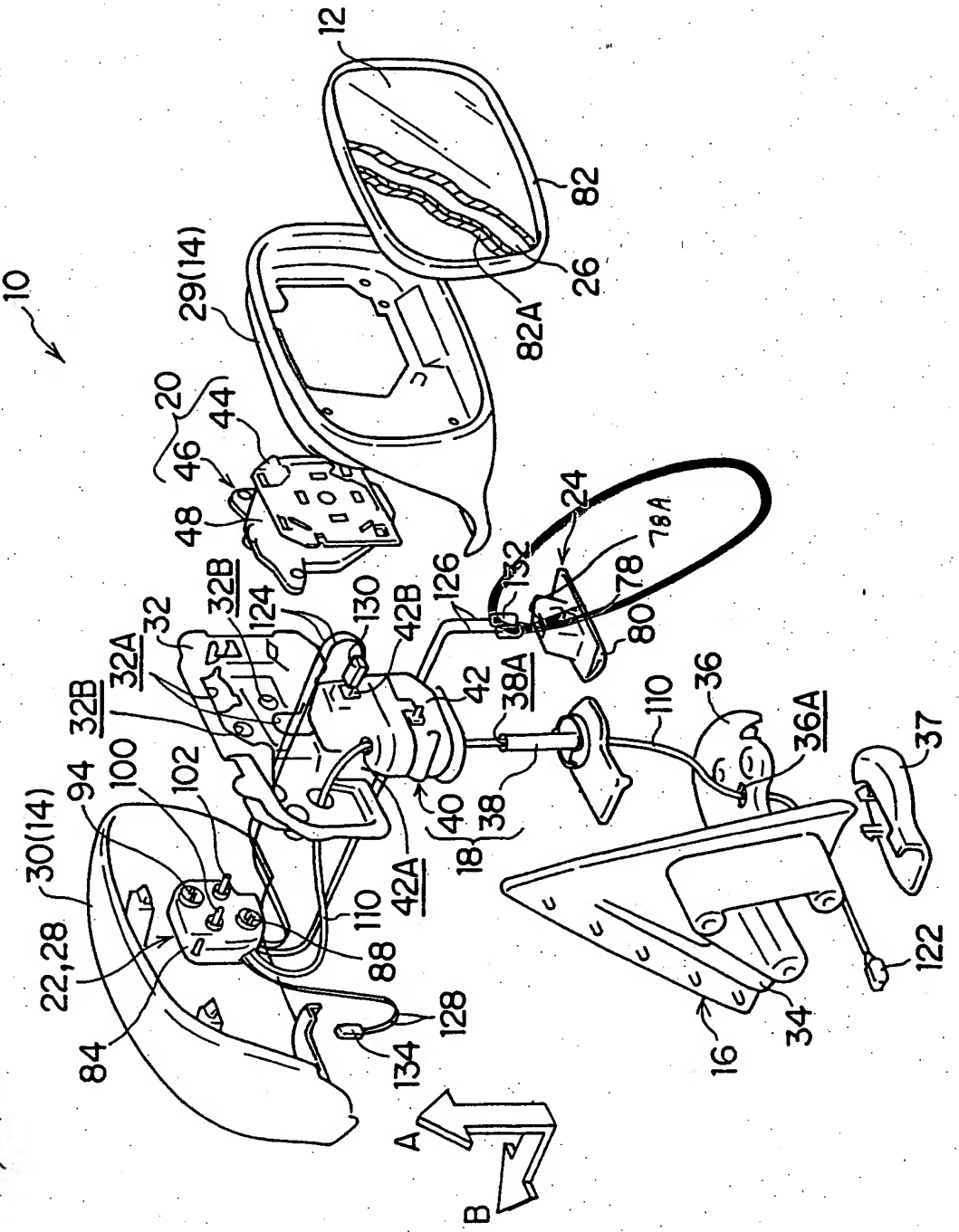
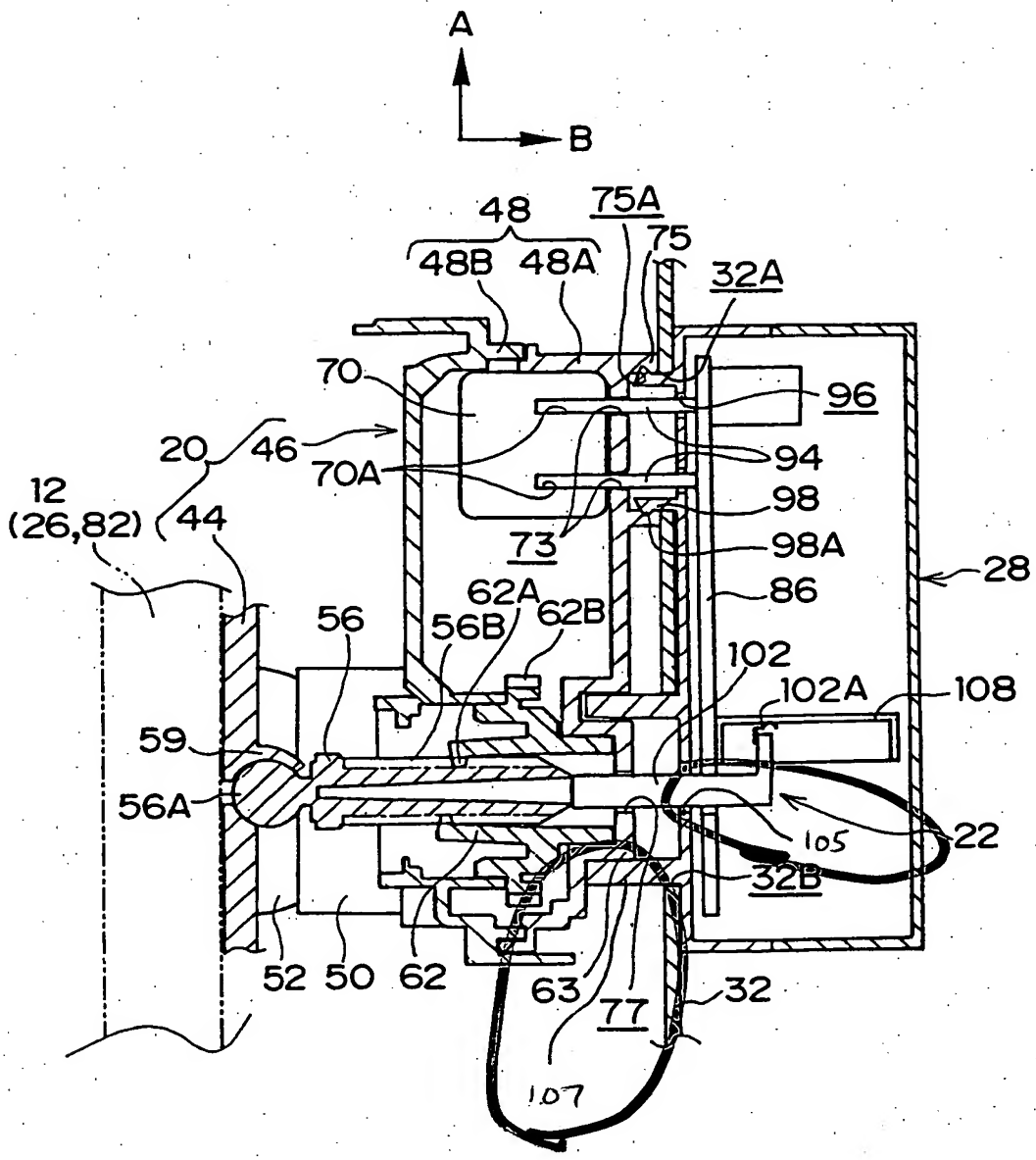


FIG. 1

FIG. 4


A
B
48
75A
75
48B
48A
32A
70
96
20
46
70A
94
12
(26,82)
44
98
73
98A
28
62A
86
56
56B
62B
102
102A
108
59
56A
105
22
32B
52
50
62
63
77
32
107

Prior Art

FIG. 9